

rial to consist principally of fresh-water Diatomaceæ cemented together with some hydrocarbon.

An analysis of the caoutchouc had been forwarded to him, which was as follows:—

Moisture	.	.	.	.	.	.	0.4682
Carbon	.	.	.	.	.	.	64.7300
Hydrogen	.	.	.	.	.	.	11.6300
Ash	.	.	.	.	.	.	1.7900
Fixed carbon	.	.	.	.	.	.	1.0050
Oxygen and other unestimated matters	.	.	.	.	.	.	20.3768
							100.0000

MARCH 13.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-two members present.

Papers entitled "Notes on Genera Acidaspis, Murchison, Odontopleura, Emmrich, and Ceratocephala, Warder," by A. W. Vogdes, and "Chemical Notes," by Geo. Hay, were presented for publication.

The death of Frank W. Lankenau was announced.

Evolutionary Law as illustrated by Abnormal Growth in an Apple Tree.—Mr. THOMAS MEEHAN exhibited some branches of a "Smoke-house" apple tree, which had the cluster of flowers at the end of a young shoot, flowering after the leaves and growth had matured, instead of blooming in spurs early in spring, and simultaneously with the expansion of the leaves, as in ordinary cases. There were numerous instances of the normal and abnormal growths on the same tree, the abnormal ones flowering about six weeks after the normal ones, but both classes maturing the fruit at about the same time in the fall. He explained that physiologically there was but a slight difference between what was known in the botanies as plants which bloom from last season's wood, and plants which flower from the growth of the same year. In the case of the former the spirals are closely appressed, as could be seen by examining the old apple spurs exhibited. The scars where the leaves or their equivalent bud scales had existed were so close together that there were scarcely any internodes. In the case of that class which flower from the growth of the same year, it was simply that the spirals closely appressed in the spurs were now drawn out. In these apple branches there were from six to nine internodes before the clusters of flowers were borne.

The point he wished particularly to draw attention to was that when there was a change in one important character, there was often change in others making a complete set of characters which

need nothing but permanence to be regarded as specific. For instance, the fruit from these terminal clusters was as unlike the normal "Smoke-house" as it was possible to be. The fruit stems were very long and slender, and the fruit flattened—what pomologists term oblate. It might further be noted that this change was not a change by gradual modification through seminal agency; but a leap, and from a tree that had always produced flowers in the normal way. There was apparently no more reason why the law, whatever it may be, that operated on this one tree might not under some circumstance operate on all the trees in the orchard, or on other wild trees in native places of growth, or on the individuals of a whole district, as well as on a single tree. If trees with such a set of differences were found in a wild condition and their parentage not known, a botanist would undoubtedly regard them as constituting very distinct species, and describe and name them accordingly. It was such illustrations as these which made the doctrine of evolution in some form an absolute certainty.

MARCH 20.

Mr. VAUX, Vice-President, in the chair.

Thirty-four members present.

MARCH 27.

Mr. VAUX, Vice-President, in the chair.

Twenty members present.

A paper entitled "On Elaterite and Coorongite from New South Wales, Australia," by E. Goldsmith, was presented for publication.

Charles Ashburner and Thomas Mackellar were elected members.

P. A. Von Kotschubey, of St. Petersburg, was elected a correspondent.

The following papers were ordered to be printed:—